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November 16, 1992

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Ms. Donna R. Searcy  
Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 200554

Dear Ms. Searcy:

On behalf of Midwest Television, Inc., licensee of KFMB-TV, Channel 8, San Diego, California, submitted herewith are an original and four copies of its technical comments in response to the Second Further Notice of Proposed Rulemaking, FCC 92-332, in MM Docket No. 87-268.

Should there be any question regarding this filing, please contact the undersigned.

Sincerely,

*William H. Fitz*

William H. Fitz  
Counsel for Midwest  
Television, Inc.

Enclosures

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STATION KFMB-TV  
CHANNEL 8  
SAN DIEGO, CALIFORNIA

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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of

Advanced Television Systems  
and Their Impact upon the  
Existing Television Broadcast  
Service

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MM Docket No. 87-268

To: The Commission

COMMENTS OF MIDWEST TELEVISION, INC.

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Midwest Television, Inc., licensee of Station KFMB-TV, Channel 8, San Diego, California, to prepare technical comments concerning the tentative Table of ATV Allotments proposed in the Second Further Notice of Proposed Rule Making to MM Docket 87-268.

USE OF CHANNEL 8 AT LOS ANGELES FOR HDTV SERVICE IS IMPRACTICAL  
DUE TO DUCTING EFFECTS BETWEEN SAN DIEGO AND LOS ANGELES

In the Second Further Notice of Proposed Rule Making to MM Docket 87-268, the Commission has tentatively assigned Channel 8 to Los Angeles, California, as one of the seventeen 6 MHz-wide channels to be used for Advanced Television (ATV) service. All of the other tentative allotments are on UHF channels.

Although the proposed allotment would result in a nominal separation of 172 kilometers between the Mt. Wilson antenna farm near Los Angeles (the most likely location of ATV transmitters) and Station KFMB-TV, this spacing is not adequate to avoid serious interference to ATV transmissions on Channel 8 at Los Angeles. The licensed NTSC transmissions on

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SAN DIEGO, CALIFORNIA**

Channel 8 from Station KFMB-TV reach portions of the Los Angeles market by an over-water path from San Diego. This over-water path frequently experiences "ducting" propagation that provides substantially stronger fields in Los Angeles than predicted by the Commission's standard F(50,10) propagation curves.

The existence of ducting between San Diego and Los Angeles has been known and well documented for many years and was acknowledged by the Commission as recently as September 1992, in MM Docket 85-251. That docket involved amending the TV Table of Allotments to add Channel 51 at Ventura, California. That proposed allocation was objected to by Station KUSI-TV, Channel 51, San Diego, which argued that unacceptable co-channel interference would be caused due to ducting along the southern California coast. Although the Commission ultimately declined to allot Channel 51 to Ventura for other reasons, this rule making did state:

*Ducting is a phenomenon caused by atmospheric conditions that enhance the propagation of television signals most often occurring along paths over or near large bodies of water. (Memorandum Opinion and Order adopted August 24, 1992, and released September 1, 1992, at Footnote 4.)*

Thus, the existence of ducting has been officially noted by the Commission as a factor that can affect the allocation of television channels.

**MEASUREMENTS DEMONSTRATE A MUCH STRONGER KFMB-TV SIGNAL IN THE LOS ANGELES BASIN THAN PREDICTED BY STANDARD FCC METHODS**

Measurements were recently conducted by me at numerous points throughout the Los Angeles basin involving test transmissions of the General Instrument DigiCipher HDTV system on Channel 8, pursuant to Experimental TV Broadcast Station authorization BPEX-920519, issued September 1, 1992. These observations included measurement of the KFMB-TV signal at 18 points in the Los Angeles area. The field strength of the KFMB-TV

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visual carrier was measured using a calibrated dipole antenna elevated to a height of 9.1 meters (30 feet) above ground. The measurements showed substantially greater field strengths than predicted by the Commission's F(50,10) propagation curves, as follows:

<u>Distance from KFMB-TV</u>	<u>Bearing from KFMB-TV</u>	<u>Measured Field Strength</u>	<u>Predicted Field Strength</u>	<u>Difference</u>
99.6 km	326°T	84 dBu	60 dBu	+22 dB
143.2	320	64	50	+14
145.6	330	61	50	+11
152.5	340	45	49	-4
156.6	324	43	48	-5
160.3	333	66	47	+19
168.6	319	55	46	+9
170.4	328	58	45	+13
174.4	325	81	45	+36
179.2	324	47	44	+3
188.9	323	57	42	+15
188.9	323	65	42	+23
189.2	328	37	42	-5
196.6	321	57	41	+16
199.8	320	63	40	+23
200.5	320	77	40	+37
201.6	316	36	40	-4
211.9	319	50	38	+12

The average amount by which the measured KFMB-TV signal level exceeded the level predicted by the F(50,10) curves was +13 dB!

**CONCLUSION**

Because of the prevalent ducting propagation between San Diego and Los Angeles, re-use of Channel 8 at Los Angeles for ATV service at the same time as NTSC transmissions on Channel 8 at San Diego would result in intolerable interference to ATV service on Channel 8 in the Los Angeles area. Depending on the HDTV system ultimately adopted by the Commission, and the power levels used, HDTV interference to KFMB-TV is also a possibility. The tentative allocation of Channel 8 for ATV transmissions at Los Angeles would only result

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in a mutually assured disaster ("MAD"). It is my considered professional opinion that Channel 8 should be deleted from the tentative ATV Table of Allotments for Los Angeles, California.

**HAMMETT & EDISON, INC.  
Consulting Engineers**



Dane E. Ericksen, P.E.

November 10, 1992

